

ANNUAL WATER QUALITY REPORT

Water testing performed in 2007



Presented By



PWS ID#: GA0670005

Continuing our Commitment

Marietta Water was awarded Water Distribution System of the Year by the Georgia Association of Water Professionals (GAWP) in 2001, 2005 and 2007. Marietta won the awards for systems with 10,000 to 50,000 customers. We excel in facilities management and operation, personnel, equipment and technology resources, safety programs and emergency response programs.

The GAWP also named Marietta Water's Consumer Confidence Report (CCR) the best in the State for large surface water systems in 2005 and 2007. The judges "loved the layout and communication style" of the Marietta Water report. These water quality reports have also won certificates of achievement in both 2003 and 2004.

Marietta Water's Public Education Program is also known for excellence. In 2007 the GAWP named it the best in the State for systems with 10,000 to 50,000 customers. The education program is based on a variety of school programs, community outreach and educational partnerships that Marietta Water has developed and/or participated in throughout the year.



Community Participation

Marietta Water operates under the supervision of the Board of Lights and Water (BLW). The BLW was created through the State Legislature. There are seven Board Members, including the Mayor (as Chair), a City Council Member (appointed by the Mayor), and five other members of the community (appointed by the City Council.)

You can make an appointment to voice comments or concerns to the board



on water related issues by calling the board manager at (770) 794-5109. The board meets the Monday before the second Wednesday of each month. Marietta Water maintains regular operating hours of Monday through Friday, 7:00 a.m. to 4:00 p.m. To reach the service and maintenance department 24 hours a day, please call (770) 794-5230.

Source Water Assessment

During 2002, the CCMWA and the Atlanta Regional Commission completed a source water assessment itemizing potential sources of water pollution to our surface drinking water supplies. This information can help you understand the potential for contamination of your drinking water supplies and can be used to prioritize the need for protecting drinking water sources.

A source water assessment is a study and report that provides the following information: identifies the area of land that contributes the raw water used for drinking water; identifies potential sources of contamination to drinking water supplies; and provides an understanding of the drinking water supply's susceptibility to contamination.

Individual source pollution involves actual facilities, which have contaminants on site that can pose a potential health risk if humans consume those contaminants. Nonpoint source pollution is caused by development and by everyday activities that take place in residential, commercial, and rural areas; nonpoint source pollution is carried by rainfall to streams and lakes. After evaluating these sources of pollution, the report found the Chattahoochee watershed susceptibility ranking to be high and the Lake Allatoona watershed susceptibility ranking to be medium.

For more information on this project, visit the source water assessment Web site at www.atlantaregional.com/swap/, or you can request information by mail from the Environmental Planning Division, Atlanta Regional Commission, Attn: Matthew Harper, 40 Courtland Street NE, Atlanta, GA 30303.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Tim Marshall, Environmental Compliance Coordinator, at (770) 794-5229.

Outdoor Water Use Restrictions Continue

On February 11, 2008, Governor Sonny Perdue mandated that water use during the period from April - September 2008 be reduced to a level equivalent to 90% of the average use for the months April - September 2007. Filling of swimming pools and landscape exemptions were also modified by these mandates.

Here in Marietta, we all share the same water resources so we must all work together to conserve and preserve these resources for our future. Please adhere to outdoor water restrictions and look for ways to conserve water in your home and business. We ask all of our customers to reduce water usage by 10%. In this reduction you will not only lower your water and wastewater bill, but you will help ensure our water resources will last longer. For current restriction information go to <http://www.mariettaga.gov/departments/utilities/water/restrictions.aspx>.

Where Does My Water Come From?

Marietta Water purchases water from the Cobb County-Marietta Water Authority (CCMWA), a public utility founded in 1951. The CCMWA treatment facilities are supplied from two separate surface water sources. The James E. Quarles Treatment Facility, built in 1953, withdraws water from the Chattahoochee River. The Quarles plant can treat a maximum of 86 million gallons of water a day. This water is distributed and utilized on the eastern side of Cobb County and Marietta. The Hugh A. Wyckoff Treatment Facility, put online in 1972, withdraws water from Lake Allatoona. Lake Allatoona is a Corps of Engineers impoundment in north Cobb, south Cherokee, and south Bartow counties. This man-made, multi-use lake is part of the Etowah River Basin. The Wyckoff plant can treat a maximum of 72 million gallons of water a day. This water is distributed and utilized on the north and west side of Cobb County and Marietta.



Lead and Drinking Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Marietta Water is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Cryptosporidium and Giardia in Drinking Water

The CCMWA participated in a major drinking-water-quality testing program called the Supplemental Information Collection Rule (SICR). Two of the contaminants tested for under this rule are the parasites *Cryptosporidium* and *Giardia*, which have caused outbreaks of intestinal disease in the United States and abroad. These parasites are common in surface water and are very difficult to kill. Even a well-run water system may contain some live oocysts (in the case of *Cryptosporidium*) or cysts (in the case of *Giardia*). The U.S. EPA is working to resolve several scientific issues that will allow it to set *Cryptosporidium* and *Giardia* safety standards. Our 1999 testing, performed at the raw (untreated) water intake on the Chattahoochee River, located immediately north of the Johnson Ferry Road crossing, revealed the presence of *Cryptosporidium* and *Giardia* in several months samples. These organisms

were detected in the water prior to treatment. During 1999, the water at Lake Allatoona was also tested. No oocysts or cysts were detected.

In order to comply with an upcoming federal regulation, the CCMWA has been monitoring for *Cryptosporidium* and *Giardia* in the raw water from both its water sources, the Chattahoochee River and Lake Allatoona. This monitoring was performed monthly during 2005. No *Cryptosporidium* oocysts were detected at either source. *Giardia* cysts were detected in two of the twelve samplings. Again, these organisms were detected in the water prior to treatment and only at the Chattahoochee River intake. Our treatment technique is designed and optimized to remove these contaminants. Therefore, no precaution about our drinking water is currently needed for the general public. See advice about special populations and a source for further information in the Important Health Information section.

Sampling Results

During the past year we have taken thousands of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. Every regulated contaminant that we detected in the water, even in the minutest traces, is listed here. Although all of the substances listed are under the Maximum Contaminant Level (MCL), we feel it is important that you know exactly what was detected and how much of the substance was present in the water.

The State allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine ¹ (ppm)	2007	[4]	[4]	1.95	ND–1.95	No	Water additive used to control microbes
Chlorite (ppm)	2007	1.0	0.8	0.49	0.065–0.49	No	By-product of drinking water disinfection
Fluoride (ppm)	2007	4	4	0.96	ND–0.96	No	Erosion of natural deposits; Water additive that promotes strong teeth
Haloacetic Acids [HAA] ² (ppb)	2007	60	0	23.5	11.1–35.0	No	By-products of drinking water disinfection
Nitrate (ppm)	2007	10	10	1.3	0.22–1.3	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] ² (ppb)	2007	80	0	42.7	12.8–69.4	No	By-products of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2007	5% of monthly samples are positive	0	1.37	NA	No	Naturally present in the environment
Total Organic Carbon (ppm)	2007	TT	NA	2.2	1.0–2.2	No	Decay of organic matter in the water withdrawn from sources such as lakes and streams
Turbidity ³ (NTU)	2007	TT=1NTU	0	0.28	ND–0.28	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2007	TT=95% of samples<0.3NTU	0	100%	NA	No	Soil runoff

Tap water samples were collected from 50 sample sites throughout the community⁴

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	ACTION LEVEL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE ACTION LEVEL	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2005	1.3	0	0.03	0	No	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Lead (ppb)	2005	15	0	7	0	No	Corrosion of household plumbing systems; Erosion of natural deposits

IDSE SAMPLING RESULTS ⁵				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA] (ppb)	2007	25.6	8.6–25.6	By-products of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2007	52.4	11.9–52.4	By-products of drinking water disinfection

¹ Detection limit for chlorine is 0.05 ppm. Disinfection was confirmed by heterotrophic plate count. This is a method that measures total bacteria in a sample. The result was within acceptable limits.

² This contaminant is regulated by the average concentration over a period of a year.

³ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

⁴ The next round of testing is due in 2008.

⁵ Our public water system was required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products are the result of continuous disinfection of your drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water.

Definitions

AL (Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.